

Week 1-2 - Things to know

Know how:

-----Week 1-----

to transform from rectangular to polar coordinates and vice versa
to compute complex roots given polar and rectangular coordinate expressions
be able to define and plot unit impulse, constant, unit step, linear sequences and signals
to shift signals or sequences
to describe a sequence in terms of unit impulses
to check whether a signal/sequence is periodic and how to compute the period
to plot real and complex exponential sequences and signals. For complex exponential using either rectangular or polar expressions
to check whether a complex exponential is periodic or not
to plot a sinusoidal sequence/signal
to compute the period of a sinusoidal sequence
to define the digital frequency in terms of the analog frequency
to explain and apply the Nyquist theorem

to interconnect systems

to check whether a system has memory, is causal, is invertible or not

-----Week 2-----

to check whether a system is stable, is TI, is linear
to compute the impulse response of a LTI system
to compute a LTI system output, given $x(n)$ and $h(n)$
to plot input, impulse response and outputs
to compute a convolution graphically
be able to redo any of the examples done in class or handed out.